CCW331: Business Analytics

UNIT I(INTRODUCTION TO BUSINESS ANALYTICS)

2Marks:

1. **Question**: What is the difference between business forecasting and predictive analytics?
Answer: Business forecasting is the process of predicting future events, such as sales, demand, and production, based on historical data and expert knowledge. Predictive analytics is a more sophisticated approach that uses data mining and machine learning techniques to identify patterns and trends in data that can be used to predict future outcomes.

2. **Question**: What are some of the challenges of using business forecasting and predictive analytics?
Answer: Some of the challenges of using business forecasting and predictive analytics include:
Data quality: The data that is used for forecasting and predictive analytics must be accurate, complete, and consistent.
Model complexity: Some forecasting and predictive analytics models can be complex and difficult to interpret.
Bias: Forecasting and predictive analytics models can be biased, which can lead to inaccurate results.
Lack of skills: There is a shortage of skilled professionals with the expertise to develop and implement forecasting and predictive analytics models.

3. **Question**: What are some of the benefits of using business forecasting and predictive analytics?

Answer: Some of the benefits of using business forecasting and predictive analytics include:

Improved decision-making: Forecasting and predictive analytics can help businesses make better decisions by providing insights into the future.

Increased efficiency: Forecasting and predictive analytics can help businesses to become more efficient by automating tasks and identifying areas for improvement.

New opportunities: Forecasting and predictive analytics can help businesses to identify new opportunities by exploring their data for hidden patterns and trends.

Competitive advantage: Businesses that are able to effectively use forecasting and predictive analytics can gain a significant competitive advantage.

Detail Questions:

1. How can businesses use forecasting and predictive analytics to improve their supply chain management?
2. How can businesses use forecasting and predictive analytics to reduce their risk?
3. How can businesses use forecasting and predictive analytics to develop new products and services?
4. How can businesses use forecasting and predictive analytics to personalize the customer experience?
5. How can businesses use forecasting and predictive analytics to improve their marketing campaigns?

Unit II(Business Intelligence)

2Marks:

1. Question: What is the difference between logic models and data-driven models?
Answer: Logic models are based on expert knowledge and rules, while data-driven models are based on historical data. Logic models are typically used for forecasting simple events, while data-driven models are typically used for forecasting more complex events.

2. Question: What are some of the challenges of using machine learning for predictive analytics?
Answer: Some of the challenges of using machine learning for predictive analytics include:
Data quality: The data that is used to train machine learning models must be high quality.
Model complexity: Machine learning models can be complex and difficult to interpret.
Bias: Machine learning models can be biased, which can lead to inaccurate results.
Lack of skills: There is a shortage of skilled professionals with the expertise to develop and implement machine learning models.

3. Question: How can businesses use predictive analytics to improve their marketing campaigns?
Answer: Businesses can use predictive analytics to improve their marketing campaigns in a number of ways, such as:
Targeting the right customers: Predictive analytics can be used to identify the customers who are most likely to be interested in a particular product or service. This information can be used to target marketing campaigns more effectively.

Personalizing the customer experience: Predictive analytics can be used to personalize the customer experience by recommending relevant products and services to customers.

Measuring the effectiveness of campaigns: Predictive analytics can be used to measure the effectiveness of marketing campaigns by tracking customer behavior and identifying trends.

Detail Question:

1. Question: How can businesses use predictive analytics to develop new products and services?
2. Question: How can businesses use predictive analytics to reduce their risk?
3. Question: How can businesses use predictive analytics to improve their customer service?
4. Question: How can businesses use predictive analytics to make better strategic decisions?
5. Question: What are the ethical implications of using predictive analytics?

Unit III
(BUSINESS FORECASTING)

2Marks:

1. Question: Explain the difference between logic models and data-driven models.
Answer: Logic models are based on expert knowledge and rules, while data-driven models are based on historical data. Logic models are typically used for forecasting simple events, such as the demand for a product based on past sales. Data-driven models are typically used for forecasting more complex events, such as the demand for a product based on a variety of factors, including past sales, economic conditions, and competitor activity

2. Question: What are the benefits and challenges of using machine learning for predictive analytics?
Answer: The benefits of using machine learning for predictive analytics include:
* **More accurate predictions:** Machine learning models can learn from data and adapt over time, which can lead to more accurate predictions than traditional statistical models.
* **Ability to handle complex data:** Machine learning models can handle complex data that would be difficult or impossible to analyze using traditional methods.
* **Ability to identify new patterns:** Machine learning models can identify new patterns in data that would be difficult or impossible to find using traditional methods.

3. Question: How can businesses use predictive analytics to improve their customer service?

Answer: Businesses can use predictive analytics to improve their customer service in a number of ways, such as:

* **Predicting customer churn:** Predictive analytics can be used to predict which customers are likely to churn. This information can be used to target customers with targeted retention campaigns.

* **Identifying customer needs:** Predictive analytics can be used to identify the needs of customers. This information can be used to improve the customer experience by providing customers with the products and services that they need.

* **Personalizing the customer experience:** Predictive analytics can be used to personalize the customer experience by recommending relevant products and services to customers.

* **Improving customer support:** Predictive analytics can be used to improve customer support by identifying areas where customer support can be improved.

Detail Questions:

1. How can businesses use predictive analytics to develop new products and services that meet the needs of their customers?
2. How can businesses use predictive analytics to reduce their risk exposure and protect their bottom line?
3. How can businesses use predictive analytics to make better strategic decisions that will help them to achieve their goals?
4. What are the ethical implications of using predictive analytics? How can businesses ensure that they are using predictive analytics in a responsible and ethical manner?

Unit IV
(HR & SUPPLY CHAIN ANALYTICS)

2Marks:

1. Question: What are the benefits of using HR analytics to predict the demand for hourly employees?
Answer: It can help businesses to plan hiring and staffing more effectively, reduce turnover, and improve productivity.

2. Question: What are some of the challenges of using HR analytics to predict the demand for hourly employees?
Answer: The data may not be accurate or complete, and the models may not be able to predict future demand accurately.

3. Question: What are some of the key factors that should be considered when building a predictive model for the demand for hourly employees?
Answer: Company growth plans, seasonal demand, turnover rate, and other factors such as economic conditions and technological advancements.

4. Question: How can the accuracy of a predictive model for the demand for hourly employees be evaluated?
Answer: By using a holdout sample of data to see how well the model predicts actual demand

5. Question: How can the results of a predictive model for the demand for hourly employees be used to make better hiring and staffing decisions?
Answer: By identifying areas where more or fewer hourly employees are needed, and by matching employees with jobs that are a good fit for their skills and experience.

Detail Questions:

1. How can HR analytics be used to improve the productivity of hourly employees in a retail setting?
2. How can HR analytics be used to reduce turnover among hourly employees in a manufacturing setting?
3. How can HR analytics be used to create a more inclusive workplace for hourly employees in a service setting?
4. How can HR analytics be used to prepare hourly employees for the future of work?

Unit V

MARKETING & SALES ANALYTICS

2Marks:

1. What is one way that predictive analytics can be used to reduce customer churn?
Answer: Predictive analytics can be used to identify customers who are at risk of churning and take steps to retain them.

2. What is one way that predictive analytics can be used to increase sales?
Answer: Predictive analytics can be used to identify customers who are likely to be interested in a particular product or service and target them with relevant marketing messages.

3. What is one way that predictive analytics can be used to improve customer satisfaction?
Answer: Predictive analytics can be used to identify and address customer pain points before they become major issues.

Detail Questions:

1. How can predictive analytics be used to create a more sustainable and equitable customer experience?
2. How can predictive analytics be used to help businesses better understand and respond to customer needs?
3. How can predictive analytics be used to build stronger customer relationships?
4. How can predictive analytics be used to protect customer privacy and security?

5. How can predictive analytics be used to create a more ethical and responsible marketing and sales landscape?